July 11, 2016 An open letter to FCC Chairman Tom Wheeler:

Mr. Wheeler,

In your remarks to the National Press Club on June 20, 2016 concerning 5G - Spectrum Frontiers you said:

"We won't wait for the standards to be first developed ... Instead, we will ... rely on a private sector-led process for producing technical standards ..."

But it is unlikely that the private sector will be concerned with human health effects when setting standards. Health safety should be considered at the ground level of design of 5G systems and their standards, not after the fact. Any adequate health safety standards must be based on actual biological effects **including those at non-thermal levels**, of the new 5G frequencies, pulse patterns and deployment methods. Not only on thermal limits, customer benefits, industry convenience and profit.

I am a biochemist with a Ph.D. from Johns Hopkins and know without a doubt, from the findings of thousands of research papers published by scientists with independent research funding, that there are many harmful biological effects of non-thermal levels of EMF that are relevant to humans.

One of the main arguments against health effects is the claim that knowing mechanism is necessary first before one can accept data. This is a myth; no one yet knows how smoking causes cancer, or the actual mechanism behind gravity.

Honest and comprehensive independent research into health effects of 5G is absolutely necessary before actual deployment, and is therefore desirable before 5G system designs and standards have progressed very far.

Thank you, Richard H. Conrad, Ph.D., resident of Hawaii